

NOTES ON THE FAUNA OF BRITISH INDIA: BIRDS.

VOLS. IV, V AND VI. (*New edition*).

BY

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At the request of several friends who are interested in the Indian avifauna and at the urgent demand of the Editors of the Journal I have completed some further notes on the Fauna of British India, second edition. These notes which cover Vols. IV, V and VI are continuation of my former notes (vide *Bombay Nat. Hist. Soc. Journal*, August 1926 and October 1927) and comprise points which occur to me in reading through these volumes. They in no way are an exhaustive commentary; such would take up far more time than is at my disposal; moreover, a good many of the species dealt with, I have no special knowledge of, and therefore pass them over. Mere printers' errors (and there are many) also I pass over unless they are of moment. For convenience of reference, I quote the page of the *Fauna* referred to in each case and use the same nomenclature, though I do not necessarily always agree with it.

VOL. IV.

p. 7. *Picus squamatus*.—I gather from the distribution here given that both *squamatus* and *flavirostris* occur in Beluchistan. The only specimens I have seen from Beluchistan are *flavirostris*. At all events we must call them *flavirostris* at present. This race was described from the confines of N. W. Afghanistan (Murghab, R.) and *gorii* from the Helmund is said to be the same race. There are so few specimens available that it is not possible to say whether the Beluchi bird is separable or not. It certainly occurs and breeds in the Ziarat juniper forest where I have seen it and examined old nest holes. Does *squamatus* occur in Sikkim? Stevens does not record it thence.

p. 29. *Hypopicus hyperythrus*.—Mr. Whistler and I have dealt so thoroughly (*Ibis*, 1924, pp. 468-473) with this bird and Vigor's types that anything further would seem superfluous. Our researches all tended to show, contrary to Mr. Baker's assertion that in this collection described by Vigors 'there were a few Eastern Himalayan birds among them', that all these birds except *Myophonus horsfieldi* came from the Western Himalayas or foot-hills.

p. 35. *Dryobates scindeanus*.—Appears to be antedated by *Dryobates assimilis*, Blyth (*J.A.S.B.*, XVIII, 2, p. 803, 1849). Type locality Rawalpindi. (ex. Natterer MS.?).

p. 40. *Dryobates macei*.—This species certainly does extend as far west as Murree (Specimens, Whistler coll.) but the western race

is easily separable by the longer bill and wing from the Bengal race. ♂♂. W. 114-118. B. 26-30. The western form is *Dryobates macei westermanni* Blyth. (*Ibis*, 1870, p. 163.) Type in Amsterdam Museum.

p. 45. *Leiopicus*.—This genus can hardly be maintained. The difference between the tips of the secondaries and primaries is said to be less than the culmen length in *Leiopicus*. This is not true of every specimen and, if the character is taken, I find that while *major*, *minor*, *pubescens*, *auriceps*, *leuconotus* and *medius* would fall into the *Dryobates* group, *villosus* becomes a *Leiopicus*, and *scindeanus* and *syriacus* with *macei* doubtful for either group, some specimens falling into the *Dryobates* group and some into the *Leiopicus*.

p. 47. *Leiopicus mahrattensis blanfordi*.—This northern bird I consider to be a good race. Not only is the white more extensive as here noted, but the birds on the whole are larger.

mahrattensis 26 ♂♂. W. 93-101. once 107. B. 23·5-26. Most 24-25.

10 ♀♀. W. 91-101. once 103. B. 21-24. Most 22-23.

Birds from N. India.—

58 ♂♂. W. 100-111. (four under 100). B. 24-27 (odd ones N. W. India, up to 30).

51 ♀♀. W. 100-108 (five under 100). B. 23-26 (odd ones from the east side, 21 and 22).

Burma.—7 ♂♂. W. 100-106. B. 22·5-26.

7 ♀♀. W. 102-104 5. B. 21-23·5.

Burmese birds are quite like N. Indian ones, but on this small series seem to have a trifle shorter bill. However, as there is much overlapping and the series small, I should not recognize two races here. The name of the northern race is not *blanfordi* but *aurocristatus*. Tickell (*J.A.S.B.*, ii, 579, 1833.) Type locality Bhorabhum, Bengal.

p. 48. *Yungipicus*.—I cannot see that this genus can possibly be maintained. The difference between the tips of the primaries and secondaries is said to be greater than the length of the tarsus in *Yungipicus*. That is quite true, but it is also equally true in *Dryobates pubescens*, the type of the genus *Dryobates* and also in many other species of *Dryobates*.

p. 51. *Yungipicus hardwickii mitchelii*.—This bird extends much further north-west than Mussoorie. Mr. Whistler obtained it in the Kangra district and at Rawalpindi. There is a small amount of information on the nidification of this race in Hume's *Nests and Eggs*, ii, 306.

p. 70. *Brachypternus b. dilutus*.—This species of course grades into the typical form, the distribution being continuous. The birds I identified as belonging to the Sind race were from S. W. Punjab.

p. 72. *Dinopicus*.—*Picus* is masculine and presumably *Dinopicus* also; *intermedius* and not *intermedia* therefore.

p. 78. *Key*.—In first line for breast, *back* is meant.

p. 93. *Picumnus innominatus innominatus*.—This Piculet occurs much further west—to Dharmsala,

p. 100. It is stated that, unlike Woodpeckers, Wrynecks can run backwards and downwards with facility. I cannot speak for certainly about other woodpeckers, but I have frequently seen *Picus viridis* run backwards and downwards on a tree trunk.

p. 100. *Jynx torquilla japonica*.—I agree that this is the form breeding in Kashmir, but it does not breed or occur in Beluchistan. The race there is the typical one and only as a passage migrant. Does it breed all along the Himalayas? I doubt it. A winter visitor to Sikkim (Stevens). The bird occurring in the Punjab and Sind in winter is the typical race. Mr. Whistler and I have failed to find a single winter specimen of *japonica* in this area.

p. 113. *Thereiceryx lineatus intermedius*.—An unrecognizable race. 15 Burma W. 120-135, 15 Nepal, Bhutan and Buxa Duars W. 119-139. It seems useless to try and recognize two races on average difference of 7 mm. in wing length. Only extremes could be assigned to either race leaving about 80 per cent unnamable.

p. 116. Key to *Cyanops asiatica*.—'Band across vertex blue . . . *davisoni*.' In the description of this race the band is said to be black.

p. 117. *Cyanops asiatica asiatica*.—This Barbet is said to be 'rare anywhere east of Nepal'; this is certainly not so and it is common in some districts to the west of Nepal.

p. 126. *Xantholema*.—The key here is obviously wrong. It divides *Xantholema hemacephala* with culmen 16 mm. or over from *indica* with culmen 15 mm. or under, but in the measurements given under the description of *indica*, the culmen length is given as 17-18 mm.

p. 136. *Cuculus canorus canorus*.—The distribution given will need amending. The breeding range 'practically all Europe within the Arctic Circle' is really only a very small part of this bird's range in summer; it breeds throughout most of Europe outside the Arctic Circle as well. I have already twice pointed out (*Ibis*, 1916, p. 38) that the breeding bird over a large area of the Punjab belongs to the typical race. I do not think this bird winters in India at all and certainly not in the North-west. As Mr. Whistler and I have pointed out again and again, it is a passage migrant in autumn and there are no winter records of it in Sind or the Punjab.

pp. 141-3. *Cuculus optatus* and *poliocephalus*.—It is not clear what is meant by 'young birds', 'second stage', 'third stage'. Are these different sequences of plumage, or individual variations, or dimorphisms of one plumage? The same remarks apply to the descriptions of some of the other Cuckoos, e.g., *Cacomantis merulinus*, *Hierococcyx fugax*, *Chalcites xanthorhynchus*, etc., where 'young bird', 'nestling' (surely the same plumage!) and 'older plumage' are distinguished.

p. 157. *Penthoceryx sonneratti*.—Latham described this bird from India in 1790. At that time N. Cachar was not within Indian territory and it is most unlikely that Latham's bird came from there. I suggest Bengal as being more probable as the type locality. The differences given between *Penthoceryx* and *Cacomantis* do not seem to be generic ones.

p. 167. *Clamator jacobinus*.—The impression here given is that

this Cuckoo is a common bird all over India at all times of the year. This certainly is not so; over a huge part of India it is a 'rains visitor' and as such, a marked migrant. Where does it go to in the non-breeding season? S. India? Africa? (see also *B.N.H.S.J.*, xxxiii, p. 136, where Mr. Whistler has dealt in detail with this question).

p. 185. *Toccacua leschenaulti leschenaulti*.—The date of *leschenaulti* in the text is given as 1830, and in the heading as 1831.

I see no difficulty about the question as to where Blyth's *infuscata* came from. When Blyth wrote his *Catalogue* he only had one specimen of *infuscata* and it came from the 'Tarai region near Darjheeling' which therefore must be the type locality. Working with the same material as I did (*Ibis*, 1923, p. 41), Mr. Baker has come to rather different conclusions. I could not separate the Hill Sirkeer (*infuscata* *apud* Baker) from the Punjab Sirkeer (*sirkee*), and *affinis* I felt very doubtful about as there are no specimens from the type locality and only two from Bengal at all. I, therefore, put the Southern Bengal birds with *leschenaulti* which they appeared quite to resemble. I used *infuscata* for the N. E. sub-Himalayan bird.

pp. 205-6. *Psittacula cyanocephala*.—The distribution of *cyanocephala* and *bengalensis* is very curious. The former is said to be the race in Western Bengal, Sikkim and Bhutan Duars, and the latter to be the race in Bengal, Nepal and Sikkim. Is this correct? It seems that there is considerable overlapping.

p. 210. *Psittacus alexandri*.—The reference here must be wrong; 1754 belongs to the pre-Linnean era. The reference should be *Linn. Syst. Nat.*, Ed. X, 1758.

p. 215. *Psittacus incertus* (Shaw. Nat. Misc.).—It is not stated where the typical form comes from but the type locality can be India only 'in error'.

p. 129. *Psittinus beryllinus* (Forster, 1781).—Here, as in a good many cases throughout this work, the original reference is given with a generic name the original describer could never have used. Besides being incorrect, it is confusing.

p. 222. *Coracias garrula*.—The typical race is said to be lighter in colour than the Indian bird. It is slightly *darker* in summer dress, but in the juvenile dress and winter plumage *very markedly* so. Single birds from Kashmir are a trifle larger than any from elsewhere within the range of *semenowi*, but on a series no appreciable difference can be seen.

Kashmir. W. 195-212. T. 120-137. B. 41·5-47.

Iraq, Persia, Punjab and Sind. W. 185-208. T. 118-137. B. 40-45.

Semenowi was described from Transcaspia and birds from Turkestan do not appear to me to be smaller than Kashmir birds though odd ones from the latter locality are large.

p. 232. *Melittophagus*.—It is said that this genus is only distinguished by the central tail feathers not projecting beyond the rest of the tail and are of similar shape to the lateral. It seems a very poor generic distinction. The central tail feathers in *M. erythrocephalus* are *not* the same shape as the laterals; and in the juveniles of *Merops* the central tail feathers are of the same length as the laterals. The *genus* seems unnecessary.

p. 233. *Merops apiaster*.—'Young birds' and 'Nestling' are the same plumage and the majority in this plumage correspond best with the description given under the former heading. The distribution is not correct, as this bird does not breed in Garhwal, Sind, Rajputana or the Punjab. It is also implied that in winter it occurs as far south as Pandharpur. This Bee-eater does not occur anywhere in India in *winter*; it is, as I have already pointed out, a passage migrant in N. W. India.

p. 237. *Merops orientalis biludschicus*.—Does this bird breed at Quetta? I could find no record of its doing so, nor did I see it there.

p. 239. *Merops s. persicus*.—I do not think there is any mystery about the movements of the Persian Bee-eater. It is known to winter in tropical Africa and is known to breed in Egypt, Palestine, Iraq, Persia, Transcaspia, Afghanistan, Beluchistan and parts of N. W. India. Between these two areas it is a common passage migrant in many places such as Egypt, the Red Sea, Arabia, Persian Gulf, Iraq, Beluchistan, etc.

p. 246. *Ceryle rudis*.—I should think that the typical race is most unlikely to occur in Sind where *leucomelanura* is common. The typical race is only known to occur as far east as the Shiraz district in S. Persia. East of this appears to be a gap in the distribution of this species till in Las Belas *leucomelanura* occurs. The typical form is hardly likely to wander from Persia to Sind.

The type locality of *Ceryle rudis* is not Persia but Egypt; it was described by Linnaeus ex Hasselquist.

p. 253. *Alcedo atthis pallasii*.—I do not think it is certain that *pallasii* breeds in Sind. Both this and *bengalensis* occur; but which breeds I could not ascertain as there appeared to be no breeding birds in any collection. Mr. Whistler is in the same difficulty over the Punjab. But in Kashmir where this Kingfisher is common, the breeding bird is *pallasii*.

p. 254. In the Key to *Alcedo meninting* the statement that the anterior crown is tinged with greenish, I have found misleading. To my eyes (and those of others) it is cœrulean blue and this should be amended in the description of *coltarti*.

p. 258. *Alcedo hercules*.—No type locality is given. As the name is a re-naming of *grandis* which came from Darjheeling, this is the type locality. But the correct name appears to be *megalia* Blyth.

p. 268. *Halcyon smyrnensis* Linn.—Linnæus described this bird from Albin's work and the latter described a bird from Smyrna which is then the type locality.

pp. 308-313. *Upupa epops* races.—The measurements of the wings of *saturata* and of *orientalis* do not quite tally with my measurements. No example of *saturata* from its breeding area measures as little as 123, I made the smallest 140. Nor could I find any Indian breeding birds of *orientalis* so large as 160; maximum about 140.

p. 323. *Micropidae*.—The keys to the Swifts will need some revision to make them workable. In the key to the sub-families two groups are distinguished, those with feathered tarsi and those with

naked tarsi or nearly so. In the latter group falls the sub-family *Chæturninae*. Turning to page 339 one of the characters of the group is the naked tarsus. This sub-family contains the genus *Collocalia* and turning to page 346 a key to this genus is given and the characters given to two of the species is 'tarsi feathered'!

p. 324. *Micropus melba*.—These Swifts want revising when material is available. I am pretty sure that the North Indian bird is not the same as the South European one. The North African-Palestine bird is I think separable as *tuneti*. Fresh moulted North Indian birds are paler even than spring birds of the typical race.

p. 331. *Micropus pacificus leuconyx*.—This race only differs in size; the colour of the legs and feet are as in the typical race (i.e. purplish-brown or purplish-black) not flesh-coloured.

p. 338. *Tachornis batasiensis palmarum*.—The distribution given is far too wide. Over a huge area of N. W. India it does not occur at all, as for example, in Sind, Punjab and N. W. Province.

p. 350. *Hirundo francica* Gm.—The date should be 1788, not 1799.

p. 354. *Hirundo coronata* Tickell.—The date should be 1833 not 1883.

p. 360. *Caprimulgus europæus unwini*.—This Nightjar does not occur in N. W. India in winter at all. There is no record of it at this season in Sind or the Punjab. It is, however, a common passage migrant and winters in Africa. I made this quite clear in the *Ibis*, 1922, p. 531, and 1923, p. 37.

p. 365. *Caprimulgus nipalensis* Hartert.—This name cannot be used. Dr. Hartert took this name from *Hodgson's M.S.*, but as a *nomen nudum* it had already been made a synonym of *albonotatus* by Blyth in his *Catalogue*.

p. 369. *Caprimulgus mahrattensis*.—Also breeds in the Punjab Salt Range.

p. 405. *Strix butleri*.—Of this mysterious Owl two further specimens have been obtained in the Wadi Feiran in Palestine and probably elsewhere there (vide *B.N.H.S.J.*, xxxi, p. 64).

pp. 408-9. *Ketupa zeylonensis*.—Races of this Fish Owl are no doubt very difficult to elucidate and Mr. Baker and I, on examining the same material, have come to quite different conclusions. I felt very doubtful about recognizing any races at all since there are only five specimens from Ceylon in the British Museum. However, I restricted *zeylonensis* to Ceylon and recognized *leschenault* from the rest of India. Mr. Baker can on the same series recognize four races! As regards the two Sind and N. W. F. Province birds, I have already pointed out that these differ very markedly from any others and do *not* correspond with topotypes of *semenowi* from Arabistan and in fact these latter could be matched with birds from India. When two such entirely different results are attained with the same material, it suggests that the races are very poor ones or the material is very insufficient.

p. 411. *Ketupa flavipes*.—This is listed by Ward as uncommon in Kashmir, but no one else seems to have met with it at all.

p. 419. *Huhua orientalis*.—This is *Strix orientalis* of Horsfield 1821 but not the *Strix orientalis* of Shaw 1809 and therefore unfortu-

nately *orientalis* cannot be used for this bird. The correct name for the Malay Eagle Owl then is *Huhua sumatrana* (Raffles) and the Javan race *Huhua sumatrana strepitans* (Temm.). *Strix orientalis* of Shaw is a re-naming of *Strix sinensis* of Lath. (*Ind. Orn. Sup.*, xvi, 1801) preoccupied by the same name in the *Ind. Orn.*, i, p. 53, 1790. Hence the bird on page 403 called *Strix seloputo* should be *Strix orientalis* Shaw or, if the Javan bird is a distinct race, *Strix orientalis seloputo*.

p. 432. *Otus brucei*.—This Owl has also occurred at Phillaur in the Punjab (Whistler coll.). This bird certainly breeds in the Chaman-Quetta district as I have seen nestlings from both places.

p. 434. *Otus scops rufipennis*.—This is of course a race of *sunia* not of *scops*.

Otus scops leggei.—This too is a race of *sunia* (vide *Ibis*, 1923, p. 242).

p. 437. *Otus sunia modestus*.—I included the Burmese bird with *japonica* from Japan (*Ibis*, 1923, p. 243) because I could see no sufficient or constant difference between the two. The series from Japan in the British Museum is not very large and the birds thence are highly variable in colour and pattern and one could pick out Japanese birds to match Burmese ones. If one compared Burmese birds with the series in the British Museum from the Amur, the two are easily separable; however, *japonicus* was not described from Amur but from Japan.

p. 433. *Otus scops pulchellus*.—This bird may be a winter visitor to Sind; there are too few records of it to indicate for certain, but it certainly is a *summer* visitor to North Beluchistan and breeds in the juniper forest at Ziarat and doubtless elsewhere.

p. 437. *Otus sunia malayanus*.—The date of this description should be 1845, not 1842.

p. 438. In the Key to species the first primary in *brama* is said to be longer than the seventh. This is not constant. Sometimes it is longer, sometimes equal, sometimes shorter.

In the Key to sub-species it is stated 'wing under 145 mm . . . *pulchra*' but in the measurements of *pulchra* on page 441 the wing length is given as 143-158.

p. 441. *Athene noctua*. Scop.—The type locality is Carniola, not Sweden.

p. 445. *Glaucidium cuculoides rufescens*.—Type locality omitted; it should be Manipur.

p. 449. *Glaucidium radiatum malabaricum* (Sharpe, 1883).—This was named by Blyth (*J.A.S.B.*, xv, 280, 1846).

p. 456. *Ninox scutulata isolata*.—The type is said to come from Camoorta. It may be a small point, but we may as well be accurate. Mr. Baker himself described this bird from Car Nicobar at the reference given.

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p. 13. *Gyps f. fulvescens*.—This is almost certainly the breeding bird round Quetta and probably in the Kirthar range too.

p. 15. *Gyps tenuirostris* and *G. tenuiceps*.—Certainly neither of these names can be used. Blyth made them both synonyms of *indicus* in his *Catalogue* some years before Gray did so.

p. 31. *Key to Genera*.—This key fails at C 6, as in *Astur* the bill is far longer than three quarters the length of the hind toe without claw.

p. 32. *Falco calidus*. *Lath.*—The date is 1790, not 1709.

pp. 43 and 44. *Falco subbuteo centralasiæ* and *jarkutensis*.—These two races of Hobby seem to be exceedingly poor ones; in Europe one may find paler or darker birds than the average and the same appears to be the case in Asiatic birds. The difference in measurements too is almost negligible and only a very small percentage of either could be differentiated on the two characters together. The distribution given of the three races suggest too that they are not sufficiently defined to be recognizable. Thus the typical form is said to extend from West Europe right across Asia to Japan, *centralasiæ* in Central Asia; *jarkutensis* also in Central Asia.

p. 47. *Foot note*.—Also the name *Falco indicus* cannot be used as it is preoccupied by *Falco indicus* Gm.

p. 59. *Erythropus amurensis*.—The distribution given as regards India is 'in winter in N. E. India.' Here seems a point to which Indian ornithologists might give attention. What exactly is the status of this bird? The older records do not suggest at all that these birds winter in N. E. India. It is true there are records of odd birds in January and February in Pegu and Cachar. At Dibrugarh, Hume expressly says, the birds do not stop; Inglis in N. E. Cachar says all disappear by mid-December and were not seen again till October; in Lower Bengal it is said to occur only in the rains. There are odd, mostly undated, records from Nepal, Darjheeling, Kumaon, Carnatic, Nilgiris and Ceylon. There is a record that thousands were seen passing over Belgaum on November 24. Apart from stragglers, does it winter in India at all? If it merely passes through India to reach winter quarters in East Africa, what route does it take? These are points which require further research.

p. 60. *Cerchneis*.—Surely the genera *Cerchneis* and *Erythropus* cannot be maintained on the characters of the feet. Those in the former *genus* are said to be smaller and weaker than in *Erythropus*. This may be true if *naumanni* is compared with *vespertinus* but assuredly not true if *tinnunculus* is taken for comparison.

p. 61. *Cerchneis tinnunculus*.—The adult female is normally tinged with grey on the rump and tail and the juvenile male acquires the blue grey tail at the fifteen months' moult.

Breeding birds in Mr. Whistler's collection from N. W. Himalayas from 2,000 feet up and from Ladak do not differ from *Falco tinnunculus tinnunculus*. In this series one can see rather paler ones and rather darker ones, some are small (σ . W. 234) and in the same area others are large (σ . W. 250). This same variation is seen both in colour and in size in European birds, and all of these birds of Mr. Whistler's can be matched with British examples.

p. 64. *Cerchneis tinnunculus japonicus*.—This name cannot be used. It is the *Falco japonicus* of Temminck and Schlegel but not

the *Falco japonicus* of Gmelin (Syst., 1, p. 257, 1798). In the *Bulletin, B.O.C.*, October 1929, I re-named it *japonensis*.

p. 67. *Aquila fulvescens* was described by Gray, not Brooks. This bird, according to Jerdon, Murray, Hume and Sharpe, is what we now call *vindhiana*. Brooks for a time believed it to be a distinct species and Blanford followed him.

p. 69. *Aquila heliaca heliaca*.—Is it quite certain that this bird breeds in the Beluchi-Sind hills, i.e., the Khirthar? It is said to build in trees; if so, I can imagine no place less likely to attract it.

p. 75. *Aquila clanga clanga*.—Hume did not record this Eagle nesting in Sind on his own observation. He says that he was informed that it breeds commonly there. If Rattray found it nesting at Shikarpore in Sind, I suppose there is no doubt about it.

Aquila hastata.—Besides the distinctions given, this appears to be a smaller bird than *pomarina*.

p. 117. *Ichthyophaga h. plumbeus*.—The distribution given implies that this bird is common in Kashmir. It only occurs in one place in the Jhelum valley and in Kashmir it has been much confused with *H. leucoryphus*.

p. 121. *Milvus*.—It is said that no generic difference can be seen between *Milvus migrans* and *lineatus*. I do not think any generic difference has been suggested. Perhaps specific difference is meant.

Milvus migrans.—The ranges of this Kite and *govinda* meet in the Quetta district; *migrans* is a summer visitor from Africa to the wooded hills, *govinda* has extended up the Quetta valley from India.

p. 136. What a troublesome group the Indian Buzzards are! and I fear I can contribute nothing to their elucidation. I do not, however, feel that even now the names, distribution and status are correct. No two people seem to agree about them and no doubt more and better collected material is required. Witness the treatment by three experts:—

Stuart Baker.	Hartert.	Blandford.
<i>Buteo rufinus rufinus</i> .	= <i>B. ferox ferox</i> .	= <i>B. ferox</i> .
<i>Buteo hemilasius</i> .	= <i>B. ferox hemilasius</i> .	<i>Buteo</i> <i>leucocephallus</i> .
		<i>Archibuteo</i> <i>hemiptilopus</i> .
<i>Buteo burmanicus</i> .	= <i>B. buteo japonicus</i> .	= Synonym of <i>Buteo</i> , <i>desertorum</i> .

One almost despairs of reaching the correct name of the Long-legged Buzzard! All three of these Buzzards are said to breed in Kashmir. I wonder if this is so; it is a country in which Buzzards appear to be remarkably scarce and personally I should not feel inclined to accept any identification of breeding unless the breeding bird was obtained.

p. 150. *Astur badius cenchroides*.—Here, as in some other cases, Mr. Baker entirely misquotes what I said. I certainly never said *cenchroides* bred in Sind. I was most careful (*Ibis*, 1923, p. 227), to say that I had seen no breeding birds of the Shikra but that both

cenchroides and *dussumieri* occur in winter and one, probably the former, must be a winter visitor.

p. 158. *Accipiter nisus melanoschistus*.—This Sparrow hawk also breeds in the juniper forests of Beluchistan, which fact I have already recorded and I have examined breeding specimens thence. It is quite common there.

p. 167. *Foot note*.—It is true Hume (not Blyth) records in his Sind diary (*S.F.I.*, p. 103) that he shot (not only saw) an example of *Pernis cristatus* in Sind. Either *Pernis* was a *lapsus calami* or Hume found that his first identification was not correct as he omitted the species in his Sind list.

p. 117. It is not quite true to say that Pigeons are born naked. They have a wiry sort of down more or less all over the body.

p. 179. The Key (2) to the sub-families does not entirely work; there are several pigeons, notably in the genus *Macropygia* in which the plumage is glossed to some extent but whose wings are under 200 mm.

p. 181. *Crocopus ph. phænicopterus*.—The type locality is given as 'in insula Eimeo'. The locality given by Latham was 'India'. Eimeo is one of the Society Islands and is the type locality of *erythroptera*, a pigeon described lower down on the same page of Latham's *Ornith. Index*.

p. 184. *Crocopus chlorogaster*.—I see no reason to reject Blyth's original spelling *chlorigaster*. This mistake gets copied over and over again.

p. 186. *Dendrophasa pompadora pompadora*.—The distribution has been omitted.

p. 193. *Dendrophasa prætermissa*.—The distribution is omitted.

p. 195. *Treron*.—This does not seem quite clear. It is said that two races *T. c. curvirostra* and *T. c. nepalensis* extend through the greater part of our area; *nepalensis* is dealt with *curvirostra* is not alluded to again. Does it occur or not?

p. 201. *Sphenocercus sp. sphenurus*.—Though Col. Ward recorded this pigeon as abundant in Kashmir, others do not appear to have met with it.

p. 211. *Carpophaga pusilla* Blyth.—The date of this reference should be 1849.

p. 211. *Columba bicolor*.—The date of Scopoli's name is given as 1896; it should be 1786.

p. 216. *Chalcophaps indica*.—The occurrence in Kashmir of this bird seems to be founded on error. Adams recorded a pigeon in Kashmir and Col. Ward suggested that it might be *Chalcophaps indica*. No one has met with it in Kashmir.

p. 218. *Columbinae*.—Here again there is a muddle over the date. On p. 218 it is said that Selby designated the type of the genus *Columba* as *palumbus*, in his *Ill. Brit. Birds.* in 1852; on the next page the same is quoted under the date 1925. Both are manifestly wrong. The date is important as Vigors in 1825 designated the type as *ænas*.

p. 219. *Columba livia livia*.—The Rock pigeons are admittedly a difficult group, but it seems very improbable that this race has ever occurred in N. W. India. Rock pigeons are very sedentary

birds and if the typical race normally occurs no nearer than North Persia, it is inconceivable that it should wander over 1,000 miles into N. W. India. In the past it has of course often been recorded but it was not then recognized what a variable race *neglecta* is, some specimens being barely distinguishable from *livia*.

p. 225. *Columba ænas*.—The date is of course 1758, not 1858. This seems to me a very different pigeon to *eversmanni* and besides the difference given it has darker wings and rump, and grey-blue under wings instead of white.

p. 226. *Columba ænas eversmanni*.—The fact that this pigeon seems so distinct from the European one and that Persian examples of *ænas* are in no way different to European ones makes me hesitate to accept *eversmanni* as a race of *ænas*. Though *eversmanni* is said to breed freely in the Hari Rud in the extreme N. W. Afghanistan, Zarunday's records of this bird breeding in North Persia are founded on three specimens near Meshed and Faizabad which with no certainty were breeding. As regards British Beluchistan, there is no record of the bird at all either breeding or in winter though it surely must occur in the latter season. Is it certain that Barnes found this bird breeding in Afghanistan? He did not record it in his papers in *Stray Feathers*.

p. 228. *Columba p. casiotis*.—This also breeds in the juniper forests of North Beluchistan as I pointed out (*J.B.N.H.S.* xxxii, p. 73).

p. 236. *Streptopelia turtur turtur*.—The date should be 1758, not 1754. This bird finds a place in the *Fauna* on a single example obtained at Quetta by Swinhoe. I have examined this bird and was of opinion that it could not be separated from some examples of *arenicola*. It would seem more satisfactory to give the benefit of any doubt over a single bird to the more likely race to occur, as Quetta would be well over 1,000 miles beyond the range of the typical form.

p. 238. *Streptopelia turtur arenicola*.—The distribution given is not clear. Are all these countries and districts places where the bird has occurred? or is it supposed to *breed* in all of them.

p. 238. *Streptopelia orientalis*.—No one ever seems to agree on this group of Doves and it leads to endless muddle! *Orientalis* is fairly clear, but the difficulty arises over the other two. Skyes described a bird from the Deccan as *meena*. Hartert (*Vog. Pal.*, p. 1490) gives reasons for believing that *meena* was the race that breeds in Turkestan. Baker, however, thinks *meena* is the resident N. E. Indian bird for which Hartert uses Tickell's name *agricola*. Baker uses *ferrago* for the Turkestan form. If it is doubtful what *meena* refers to, it is best dropped altogether since it was described from a locality where all three races are said to occur in winter. *Ferrago* can then be used for what is certainly the Turkestan bird and *agricola* for what is certainly the N. E. Indian bird.

p. 240. *Streptopelia o. ferrago*.—The variation in wing length seems very large for a bird of this size—169-200 mm. Are any adults as small as 169 mm., 18 mm. shorter than the minimum given by Hartert? It is said that Stevens records this bird in Sikkim, down to 4,500 ft.; but in his paper on the Birds of Sikkim he

expressly states that *ferrago* (= *meena* apud Hartert) does not occur in Sikkim at all but that *meena* (= *agricola*) and *orientalis* occur and intergrade.

p. 241. *Columba chinensis*.—The date of Scopoli's name should be 1786, not 1844.

p. 243. *Streptopelia chinensis suratensis*.—I have searched in vain for any certain record of this bird in Sind. It does not appear to occur in Sind or in S. W. Punjab.

p. 247. *Streptopelia senagalensis ermanni*.—Here again Mr. Baker attributes to me statements I never made. I never said that this bird either occurred or breeds in Sind. I said that *possibly* it occurred, but that the breeding birds were *cambayensis*. *Ermanni* is the Turkestan race and the minimal wing length of Turkestan males is 135, a wing length attained by no Sind breeding birds. The maximal wing length of *cambayensis* is 132 and Sind birds are well within that limit. It is, moreover, unlikely that Sind birds should be the Turkestan race as the type locality of *cambayensis* is only just across the Runn of Kutch less than 200 miles away. Beluchi birds and stragglers to Iraq I have already shewn (*B.N.H.S.J.*, xxxii, p. 73) are all much too small for *ermanni* and are indistinguishable from *cambayensis*.

p. 254. *Macropygia u. tusalia*.—Mr. Whistler informs me that this bird does not occur at the present day in Kashmir or in the Punjab including Simla Hill State.

p. 263. *Pterocles orientalis*.—Here as elsewhere throughout the *Fauna* Barnes' records are referred to Afghanistan. It is quite true that Barnes, who was at Chaman about the time of the Afghan War, recorded his observations as being made in South Afghanistan, but for a great many years now Chaman and the Kwaja Amran have been within the Beluchistan Agency and so all Barnes' records really refer to Beluchistan.

p. 265. *Pterocles leichensteini arabicus*.—So far as present material shews, this race is not recognizable. There are but four topotypes of *leichensteini* in the British Museum and these, when placed with a series of Sind birds, are to my eyes quite inseparable.

p. 302. *Gallus lafayettii*.—'This *species* is apparently polygamous and takes no interest in eggs or chicks'. Surely this attribute only applies to the male.

p. 316. *Phasianus rufus* Raffles.—The date should be 1822, not 1882.

p. 318. *Euplocamus diardi*.—The date should be 1856, not 1886.

p. 320. One gathers from the remarks at the top of this page that the Kalij and Silver Pheasants in Burma are, owing to lack of adequate material, in rather a hopeless state of chaos. Numbers of these birds must be shot every year by sportsmen in Burma and it is a reproach to them that after all these years there is not yet an adequate number of specimens in the British Museum to elucidate the very complicated matter. If every sportsman would make it a matter of honour to send in, say, three pair of birds from his district, even if flat skins, together with some field notes, the questions of distribution, species and races could be decided. Surely our Society should be able to organize this.

p. 324. There is a reference here to *G. albocristatus* which might puzzle some people, since on p. 320 the bird is called *G. hamiltoni*.

p. 332. I wonder when anyone will bring forward satisfactory proof that an old feather can change colour by absorbing fresh pigment. Such a phenomenon has been stated to take place in a number of instances by many authors. Some alleged cases I have investigated and in each case I have found proof to be lacking. Possible errors are many and the instance here given by Mr. Baker does not add any proof at all. From the examination of the quill of an old feather, it would seem inconceivable that fresh pigment could be absorbed through it. Yet, if a feather can so change colour, proof would not be so very difficult. If an aviculturist would select some feathers in which he anticipates such a change will be going to take place and mark such feathers distinctly and infallibly and match them with feathers which can be kept for reference, then, when and if the marked feathers change colour, proof positive will be attainable and not until.

p. 333. *Gennæus rufipes*.—The type locality omitted is Mogok, Ruby Mines District.

p. 341. *Key to Genera*.—This fails at L. 4. 'Flanks not barred . . . Francolinus' as the flanks are barred in several of the Francolins.

p. 375. *Tetrao coromandelica*, Gmelin.—The date omitted should be 1789.

p. 379. *Perdica asiatica argoondah*.—The explanation that this is a race of *asiatica* inhabiting over a large area usually rather a different terrain side by side with typical form hardly tallies with the accepted idea of a geographical race and I can think of no other parallel case. The collecting of a few paired birds in various parts of the range might help to elucidate the question; but as it stands at present, we must look upon these two birds either as two species or else as dimorphisms of one species.

p. 391. *Arboricola intermedia*, Blyth.—The reference should be *J.A.S.B.* xxiv, p. 277, 1855.

p. 402. *Alectoris graeca*.—It may be true that *chukar* is not found in any sort of forest and I always thought this to be true of all forms of *graeca*. I was astonished therefore to see odd birds of *Koriakovi* in thick juniper forest in North Beluchistan and was told by the Assistant Commissioner there that in good years numbers might so be met with. Ten brace would be an exceedingly poor bag of Chukor in parts of Beluchistan. In the very bad season of 1919 three of us got 27 brace in a morning's shoot, where in some years 100 brace or more were easily obtainable. I quite agree that *Kirthari* is not separable.

p. 406. *Ammoperdix griseogularis*.—I cannot agree that *termeuleni* is a good race as I have already pointed out (*B.N.H.S.J.*, May 1926). It was described from S. W. Persia on the borders of S. E. Mesopotamia and not from Arabia and West Mesopotamia as suggested. Pale grey birds and more sandy-red birds occur together in many parts of the range of *griseogularis*, including S. W. Persia.

p. 410. *Francolinus f. henrici*.—Under this race Mr. Baker

includes all Black Partridges from Sind westwards to Baghdad. Iraq birds (*arabisticus*) are of the same colouration as Sind birds but in wing length are larger, 14 Iraq ♂♂, W. 163-178; 11 Sind ♂♂, W. 155-162. Therefore I can hardly see how these two races can be united. I have already pointed this out (*Ibis*, 1924, p. 512 and *B.N.H.S.J.*, xxviii, p. 388). Western Mekran birds seem just separable (*bogdanowi*) from Sind birds by their paler colour and paler neck ring (see *B.N.H.S.J.*, xxxii, p. 76).

As regards the terrain of *henrici*, I do not think this differs much from that of other races. In Sind one would never find it in dry and arid areas but always in cultivation, tamarisk and grass jungle.

p. 422. *Francolinus p. mecranesis*.—The range of this bird is difficult to decide and probably no two people would agree about it. The ranges of this race and *interpositus* are continuous and intermediates are found. Thus some birds from Lower and Upper Sind appeared to be intermediate between the two and others nearer *interpositus*. I have seen no Sind birds however in any way approaching typical *pondocrianus*.

The Grey Partridge occurs up the Bolan to Kundilani and in the lower hills of the Bugti and Marri country and reaches the Loralai district. In Quetta, however, it certainly does not occur at the present day, nor have I ever heard of it occurring there in the past.

p. 434. *Lerwa lerwa*.—The Snow Partridge is said to occur between 12,000-17,000 feet; there are no hills of this height in Beluchistan and it certainly does not occur there.

p. 455. *Hemipodus plumbipes*, Hodg.—The date is omitted.

p. 448. *Turnix suscitator isabellinus*, 1928.—A very much older name for this bird is *Turnix bengalensis* (*Blyth Cat.*, p. 256, 1852).

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p. 33. It is not quite clear on what grounds *Porphyrio poliocephalus seistanicus* is omitted from the Indian Fauna. It is true that it has not occurred so far in India proper but only in Beluchistan, but the same may be said of *Strix butleri* and *Puffinus tenuirostris* both of which find a place in this work.

p. 40. *Metopodius indicus*.—No type locality is given; it should be India.

p. 49. Foot note.—The date should be 1928 not 1728.

p. 63. *Otis tetrax orientalis*.—The status of this bird needs investigation. Blanford stated that it was common round Peshawar in winter and the same is in effect said in the present *Fauna*. Is it really so or has there been a confusion of species? Mr. Baker says it is rare south and west of the extreme north-west or Trans-Indus country. Further on, however, he states that it winters in sufficient numbers in British Beluchistan (which certainly lies to the south-west of the country indicated) for bags of ten or a dozen couples to have been made in a day! Where in British Beluchistan have these remarkable bags been made and by whom identified? I cannot help feeling that some other Bustard has done duty for these 'records'. I could only find one certain record for the whole of Beluchistan. (*B.N.H.S.J.* xxxii, p. 79.)

p. 64. *Otis nigriceps*.—The Himalayas can hardly be the type

locality since the bird does not occur there. Foot-hills of N. W. India may be substituted.

p. 67. *Otis macqueenii*.—Here too the type locality cannot be the Himalayas. I suggest the foot-hills of N. W. India as more likely to be correct.

p. 68. *Sypheotides* and *Houbaropsis*.—Two genera here seem to be quite unnecessary. If we accept 'a seasonable change of plumage', by which apparently a pre-nuptial moult producing a distinct dress is meant, as a generic character then several species of birds usually placed in one genus would have to be split up. Thus *Muscicapa striata* and *M. hypoleuca* would have to be put into two different genera, since *hypoleuca* has a distinct breeding plumage. So too *Saxicola rubetra* moults into a breeding plumage, *Saxicola rubicola* does not. How too should the Wheatears be split up? We have *isabellina* and *oenanthe* with fairly complete spring moults producing hardly any change of dress in the former and a distinct dress in the latter; *leucura* and *picata* with no moult and hardly any change of plumage; *hispanica* and *leucomela* with only a few feathers shed and a remarkably different breeding dress.

p. 87. *Cursorius coromandelicus*.—For description of chick omitted here, see *B.N.H.S.J.*, Aug. 1926, p. 10. It is not quite true to say that this Cursorer is absent from the pure desert of Sind. I have found it constantly in pure desert, rather patchily distributed and rather partial to stony desert (*Ibis*, 1923, p. 649).

p. 88. *Rhinoptilus bitorquatus*.—Blyth obviously could not have described this bird under this name in 1848 if the generic name dates from 1850 or 1852. Blyth called it *Macrotarsius bitorquatus*.

p. 90. *Glareola pratincola pratincola*.—The chick (omitted) is described in the *Journal* (Aug. 1926, p. 11). The paragraph under 'Habits' seems to have got a little mixed. The birds are here called Coursers and the rest of the paragraph deals with habits so opposed to those of the Pratincole that one can only suppose that it really does not relate to this species at all.

p. 96. *Stercorariidae*.—Does not *Megalestris antarctica* occur within Indian limits? Nicoll has recorded that there are two specimens in the Colombo Museum from Ceylon and that he saw one off the south-east of that island in 5° 23' N. 84° 45' E. Wait also records these two birds and further states that *M. antarcticus maccormicki* has also occurred in Ceylon.

p. 99. *Stercorarius pomarinus*.—A further specimen is recorded from Ceylon by Wait.

p. 101. *Larus ichthyaetus*.—The date of Pallas' name is 1773, not 1733.

p. 102. *Larus ridibundus*.—The type locality (omitted) is Europe. Is not the bird from the Far East recognizable as *L. r. sibiricus*?

p. 104. *Larus brunnicephalus*.—There seems to be a slight slip here. 'Nidification' appears under 'Distribution' and the distribution of the species has been omitted.

Larus hemprichi.—The building of 'Crow-like' nests by this species needs verification. The origin of it was the attempt of Col. Butler's boatmen to describe to him the nests on *Astola*. Sir Percy Cox, the only ornithologist who has seen nests on *Astola*,

gave me quite a different account of the nests. (*B.N.H.S.J.* xxxii, p. 86).

p. 106. *Larus genei*.—By a curious slip the Persian Gulf is called the Corsican Gulf! This bird does not breed in Sind so far as we know at present. The colony at Sonmeani is in Las Belas.

p. 109. *Larus argentatus cachimans*.—The winter dress of this bird is far less streaked on the head than is the winter plumage of *faimyrensis*.

p. 111. *Key to species of Chlidomias*.—This is obviously wrong, 'culmen over 33 mm.' and 'culmen under 33 mm.', as in both species the culmen is under 33 mm. in length.

p. 114. *Chlidonias l. leucoptera*.—The distribution given is a little mixed. It is stated that this Tern migrates to all Western India; two lines further down it is stated to be common all down the east coast and very rare elsewhere. Has it occurred in the West of India at all? There seems to be a large gap in the distribution of this Tern. It is rare or unknown between the head of the Persian Gulf and the East coast of India.

p. 116. *Hydroprogne c. caspia*.—This Tern might perhaps breed on the islands adjacent to the Mekran coast if there are any. Butler and Hume mention none except Astola, nor did I see any in four trips along that coast, nor do any maps I have access to shew any.

p. 117. *Geochilidon n. nilotica*.—The Gull-billed Tern may of course breed freely on the rivers of N. W. India, but it has been recorded remarkably few times. Waite found a small colony in the Beas and Hume and Whistler single nests.

p. 122. *Thalasseus bergii bakeri*.—This race requires 'the eye of faith' to differentiate from *velox*. I can see no constant difference.

p. 129. *Sterna repressa*.—This Tern may of course breed and be resident on the Sind and Mekran coasts, but I know no proof of it. In Sind it has been obtained by Butler in Karachi harbour in April and off the Mekran coast he met with large numbers in May. No one else appears to have recorded it and certainly no one has ever found it breeding. All the evidence tends to shew that this bird is a migrant along the coast to its breeding grounds in the Persian Gulf. It does not breed on Astola so far as is known and the other islands adjacent to the Sind and Mekran coasts have yet to be found and explored.

p. 130. *Sterna hirundo*.—There seems to be very few certain records of the Common Tern in India and it certainly does not winter, as suggested in N. W. India. Hume remarked on this as long ago as 1873. Butler met with it in Spring in Karachi Harbour and I have seen non-breeding birds there throughout the hot weather and met others on passage in August.

p. 131. *Sterna hirundo tibetana*.—Surely this bird is not a very common visitor to the whole of Western India as stated here. Who has met with it? There are no records of it in Sind and the Punjab.

p. 131. *Sterna hirundo longipennis*.—I do not feel at all sure that this bird is a geographical race of the Common Tern. Does it intergrade anywhere? Moreover, both occur on the Yenesei River. The exact breeding ranges of *hirundo*, *tibetana* and *longipennis* want working out.

p. 134. *Sterna albifrons*.—I have already dealt at some length with this group (*Bull. B.O.C.* 49, p. 66); so need not do so again at length. I have already shewn that the Ternlet breeding in N. W. India is *S. albifrons albifrons*, and not *pusilla* (whatever that may be and opinion does not seem decided). In the distribution here given, there seems a huge overlap of range of *sinensis* and *pusilla*, both occurring throughout Malaya. The breeding bird of Mesopotamia I consider to be *S. albifrons albifrons* and I have recorded it as such and I have given reasons for considering *praetermissa* to be a synonym. I cannot quite make out what is meant by 'the marshes of the Northern Mekran coast'. The only place for certain that any Ternlets breed is on the Sirunda Jheel in Las Belas, but there seems to be no breeding birds thence available for examination, though I have a nestling. Mr. Baker identified eggs thence as *saundersi* and subsequently a parent bird as *albifrons*, as Mr. Ludlow informed me, and now it is said to be *praetermissa* !!! Even if this latter bird were recognizable, it should bear the prior name of *innominata* of Zarudny.

p. 139. *Sterna albifrons saundersi*.—Though this Tern may breed on the Mekran coast no one has so far proved that it does so. In fact when I wrote the *Birds of British Baluchistan* there was no certain record at all of the bird in British Mekran and I do not think it has been got since. It does not seem possible that *praetermissa* and *saundersi*, if both are races of *albifrons*, can both breed on the Mekran coast. The average length given for the eggs of this bird should be 31·7, not 21·7.

p. 146. *Anous stolidus pileatus*.—If British Mekran is included in the *Fauna*, and sometimes it seems to be, there are records of this bird thence. (*J.B.N.H.S.* xxxii, p. 88.)

p. 157. *Squatarola s. squatarola*.—To say that this bird is more common on the coastal districts than inland hardly gives a correct impression of the status. Does it occur inland at all? Even in well searched maritime countries of England such as Norfolk and Suffolk, it has hardly ever occurred inland.

Squatarola s. hypomela.—This seems to be a new variation of Pallas' name. Pallas wrote *hypomelus* apparently by mistake for *hypomelas* and the feminine should surely be *hypomelaena*?

p. 160. *Eupoda vereda*.—It is a far cry from Mongolia and North China, where this bird is supposed to breed, to Ladak. Ladak has of late been visited by several ornithologists and this species has not been met with by any of them. When Dr. Hartert wrote of this species in his *Vög. Pal. F.* (1920) the nesting of this bird was apparently unknown and this supposed egg from Ladak is the first recorded. It seems very unsafe to base records of breeding for the first time and description of the egg on the evidence of a scrap of skin since this bird, according to Hartert, is only a race of *asiaticus*.

The Andamans bird was obtained by Dr. Dobson, not Dr. Adams.

p. 164. *Leucopoliis peronii*.—If this is not considered to be a race of *alexandrinus*, it hardly seems correct to call it a Kentish Plover, nor is it clear why it finds a place in the *Fauna* at all; no part of India is included in its distribution.

p. 169. *Charadrius hiaticulus*.—Linnaeus wrote *hiaticula* and this should not be altered as it is obviously a substantive.—*Charadrius sive Hiaticula* of Aldrovandus. The distribution given implies that this bird is common in India, whereas it is excessively rare.

p. 171. *Charadrius dubius curonicus*.—This race certainly breeds in the Quetta district.

Charadrius dubius jerdoni.—The type locality should be Ceylon and the date should be 1880. The reference given here relates to *hiaticuloides* Franklin.

p. 175. *Cirrepedesmus leschenaultii*.—The date of this name should be 1826, not 1836. The wing length I measure in 17 of both sexes as 139-150. The bill measurements given here only apply to males; females have longer bills, 25-27 mm. It seems very strange that, if this bird breeds in Japan, that its nidification should be unknown; there must be few birds whose breeding range is apparently so well known but of the actual nesting nothing known. Matthews, however, in his *Birds of Australia* refers to Mr. Baker as his authority for the nesting and description of an egg of this species (also identified by a scrap of skin) from the Tso Morari Lake in Ladak. Is there then some error about this as it is not mentioned here?

p. 173. *Cirrepedesmus*.—This genus seems to be quite untenable. In it the bill is said to be decidedly shorter than in *Charadrius*; but in *Cirrepedesmus leschenaultii* the bill is longer than in any member of the genus *Charadrius*, while the bills in *placidus* and *atrifrons* are about equal, the measurements given here for the latter being too small. *Pagoa* is of course an utterly unrecognizable genus, as *Cirrepedesmus atrifrons* and *leschenaultii* are linked together by *Cirrepedesmus leschenaultii columbinus*.

p. 179. *Vanellinae*.—In the key to genera *Recurvirostra* appears in a group distinguished as 'Bill curved downwards'!!

p. 183. *Chettusia leucura*.—In the juvenile dress, if that is what is meant by 'young birds', the underparts are not at all like those of the adults; they are sullied white.

p. 185. *Hoplopterus ventralis*.—Does not occur in Kashmir.

p. 186. *Lobivanellus*.—It is here stated that in this genus and in the next (*Lobipluvia*) there is a small hind toe present but on p. 189 under the generic characters *Lobipluvia* is said to have no hind toe.

p. 191. *Microsarcops*.—The date for this genus is 1896, not 1886.

p. 193. *Himantopus h. himantopus*.—The description of the 'young male' given is certainly not that of the juvenile plumage. It appears to be a sub-adult stage or a variation of the adult plumage.

p. 195. *Recurvirostra a. avocetta*.—Though the habits given refer to the Avocet, the bird is by a slip called the Stilt.

p. 201.—*Numenius arquata arquata*.—One gathers from the distribution that this is a common bird in N. W. India. If it occurs surely it is only as a vagrant. India is a long way out of its normal distribution and all the Curlews Mr. Whistler and I got in the North-west were *lineatus*,

pp. 205-8. *Limosa limosa*.—In the key the maximum length of the culmen in *melanuroides* is given as 87 mm., but on p. 208 it is given as 95 mm. On the measurements given, the wing lengths of the two forms would provide a better key. The winter plumage described is that of a juvenile. In *L. limosa* the bill of the female is, as is well-known, longer than in the male; in *melanuroides* the male appears to have the longer bill. Is this really so?

p. 209. *Limosa l. lapponica*.—Here again the description of the winter plumage is really that of the juvenile; the winter plumage is quite different. Females, if they assume breeding dress (and there are always some birds of both sexes which do and do not breed in that year), always, so far as I have seen, don a *complete* breeding dress; but this is not at all the same as that of the male. The habits in autumn and winter are different to those of the Blacktailed Godwit as the latter is a fresh water bird, the Bartailed Godwit is eminently a salt water species.

Limnodromus.—This name is antedated by *Macrorhamphus* of Forster, 1817. It is not clear why Blyth's prior name *semipalmatus* has been dropped. *Scolopax semipalmatus* of Gmelin does not invalidate it.

p. 213. *Xenus cinereus javanicus*.—This is another race which needs the 'eye of faith'. I could see no colour differences to distinguish European and Far Eastern birds and I found the bills measured almost the same. Europe 43·5-49·5; Far East 44-51. (See also Riley, *Pro.U.S.Nat.Mus.* 54, p. 615.)

Xenus is surely the same word as *Xenos* and therefore cannot be used for the genus, owing to prior use of the latter name. (cf. *Apus* and *Apos*.)

p. 215. *Tringa ochrophus*.—I thought the correction of this error to *ochropus* had been accepted by everybody. Under 'nidification' the Green Sandpiper is referred to as the Marsh Sandpiper.

p. 217. *Tringa stagnatilis*.—I do not think this has yet been proved to breed in S. E. France. Surely this is not a seashore bird at all, I have never met with it on the actual shore and only very occasionally on salt pools at the heads of creeks.

p. 220. *Tringa glareola*.—The distribution and nidification have been omitted altogether.

Tringa totanus.—My examination of Mr. Whistler's breeding birds from Ladak leads to a different conclusion to Mr. Baker's. These Ladak birds I cannot match at all with a series of breeding birds from Suffolk. They stand out conspicuously different. If Suffolk birds belong to the typical race, then these Ladak birds do not. Moreover, these Ladak birds have very long bills—44·5-48 mm. as against 41-43·5 mm. in British breeding birds, and are much more heavily spotted on the under parts. Does any West European Redshank have a wing as short as 134 mm.? My smallest of a long series measures 154 mm.

p. 223. *Tringa totanus terrignotae*.—This race occurs of course also in N. W. India, but before *terrignotae* was separated, they were recorded as *eurhinus* (e.g. *Ibis*, 1924. p. 120).

p. 225. *Glottis*.—This genus seems unnecessary. If a recurved bill distinguishes this genus from *Tringa* why not distinguish *Erolia*

minuta, etc., with straight bills from the decurved bill of *Erolia testacea*, the type of the genus *Erolia*?

p. 228. *Philomachus*.—The Rules of Nomenclature infer that an author must have a name and under these circumstances it is difficult to see how an anonymous person can be accepted as an author. If my view is correct, then *Philomachus* cannot be used.

Philomachus pugnax.—This dichroism in the colour of the legs of the Ruff is very curious. Adults, so far as I have seen, have the legs distinctly yellow or distinctly greenish and in the young there is generally an indication of what the colour is going to be when adult. The first Ruffs arrive in N. W. India in the first week of August, the bulk come early in September.

pp. 230-1. *Crocethia*.—Vroeg did not describe any birds. Vroeg's catalogue names are accredited to Pallas who is therefore the author of the names and the date is 1764, not 1864.

p. 233. *Eurynorhynchus pygmæus*.—It is certainly not correct to say that nothing is known about the nidification of this bird. The nesting in the East Cape, N. E. Siberia was discovered so long ago as 1913 and recorded by Brooks (*Bull. Mus. Comp. Zool. Harvard*, LIX. 5, p. 382) in 1915 and the account duly finds a place in *Vög. Pal. Fauna*, p. 1603.

p. 238. *Erolia temminckii*.—This bird differs in habits from the Little Stint in one important particular. I have never met with it on the sea-shore nor heard of anyone else doing so. In fact I have never met with it in a salt water terrain at all, whereas the Little Stint may be found on both salt and fresh waters.

p. 244. *Calidris tenuirostris*.—A few notes on the habits of this bird may be found in *S.F. i.* and *Ibis*, 1924.

The Common Knot does not find a place in the *Fauna*. One is recorded from N. Beluchistan (*B.N.H.S.J.* xxxii, p. 83) and another from Ceylon on December 15, 1923. (*Wait, Birds of Ceylon*, p. 375.)

p. 248. *Phalaropus fulicarius jourdaini*.—In an authoritative work like the *Fauna*, I think it is expected that no bird should be listed as occurring within our limits over which there can be any reasonable doubt. It is quite true that Blyth obtained a single Grey Phalarope in winter dress at Calcutta, but it must be pure surmise that the race of Grey Phalarope he got was *jourdaini*. Apart from the question whether this is a good race or not, no one, even the author of it, pretends he can distinguish it in winter plumage. Such records are far better left under a binomial name.

p. 250. *Phalaropus lobatus*.—I can recall no Wader which skips a winter plumage and goes straight from juvenile dress into breeding plumage and if this Phalarope did so, it would be very remarkable. However, it does not do so as I have in my collection a young bird in full winter dress with a grey mantle, and a juvenile moulting into winter plumage. Here, as so often in the *Fauna*, the 'Habits' given apply to the breeding season even when the species does not breed in India. The habits of this Phalarope as seen in India were fully described in the *Ibis*, 1924, p. 126 and *J.B.N.H.S.* xxxii, p. 83.

p. 261. *Capella gallinago raddii*.—The distribution is omitted. This seems a very questionable race. It must be remembered that

the European Snipe is paler in summer, a season when few are obtained, than in autumn, whereas this is the season when *raddii* have been got. The axillaries seem variable; thus I have seen English birds with almost unbarred axillaries. On the other hand, Riley records birds from Nijni Kolymsk, which ought to be *raddii*, as being 'as heavily barred as in any European Bird on the axillaries.'

p. 265. *Capella megala*.—This bird occurs in Upper Burma as I had a tail sent me thence for identification in 1923.

p. 271. *Pelecanus onocrotalus onocrotalus*.—It is not correct to say that I could not determine which Pelican breeds in Iraq. In *B.N.H.S.J.*, May 1926, p. 19, I stated that adults from the colony on Bubyon Island off Fao were *onocrotalus*, the typical race. Mr. Baker decides that their chicks and eggs belong to *roseus*. On p. 272, he says the young of *roseus* is indistinguishable from that of *onocrotalus* and I suggest that the chick is too. Nor am I convinced that one can differentiate eggs of these two races. On the measurements here given, it will be seen that the smallest eggs of *onocrotalus* are far smaller than the largest eggs of *roseus* and indeed smaller than the *smallest* eggs of *roseus*, so that by measurements there must be a number of eggs which might belong equally to either race.

p. 280. *Phalacrocorax fuscicollis*.—'On the Mekran and South coasts all three species of Cormorant may be seen fishing in the sea'. As regards British Mekran, this bird *probably* occurs, though no one has so far recorded it. *Ph. niger* certainly occurs in the valley of the Mashkai and probably elsewhere in the few places where there is sufficient fresh water. But does it really occur at sea? Who has obtained it? Has anyone ever seen this bird at sea anywhere?

p. 283. *Anhinga melanogaster*.—'West to Mesopotamia'. I went very fully into the question of the Darter in Mesopotamia (*B.N.H.S.J.*, xxviii, p. 327) and shewed that it is the African *rufus* which occurs there and not the Indian bird. I confirmed this again (t. c. May 1926, p. 19).

p. 285. *Sula leucogaster plotus*.—To the distribution may be added 'several times in Ceylon'. (Wait.)

p. 288. *Sula d. melanops*.—It is rather amazing to learn that the nestling in down of this bird is known and here described when the 'breeding haunts have not been discovered'. How was the chick obtained?

pp. 292-3. *Phaeton rubricauda* and *Ph. lepturus*.—Have these birds really been obtained in the Persian Gulf, and by whom?

p. 296. *Fregata andrewsi*.—Also twice in Ceylon (Wait).

p. 297. *Fregata minor aldabrensis*.—Nicoll neither met with this bird nor recorded it from Ceylon. There is, however, a bird in the Hume collection from Neville.

p. 299. *Tubinares*.—A confusing word *Puffinidae*! Here they are called Puffins instead of Shearwaters.

p. 301. *Oceanites o. oceanicus*.—One is also recorded from Ceylon Nov. 1908 (Wait).

p. 304. *Puffinus pacificus hamiltoni*.—I have already pointed out (*B.N.H.S.J.*, xxxii, pp. 89-90) that the bird recorded by Cumming as *chlororhynchus* from Ormara in May 1899 is the same bird as

that also recorded on 305 of the *Fauna* as *P. tenuirostris* obtained by Mr. Walter Scott, and that the latter identification is correct.

p. 375. *Phoenicopterus r. antiquorum*.—‘Their method of feeding is curious; their long heads are bent down *between their equally long necks*’! Extraordinarily curious!! I quite missed this remarkable phenomenon when in India.

p. 378. *Anseres*.—Here is a point to which Indian ornithologists might pay attention—which, if any, of the Indian *Anseres* cast their flight feathers in pairs instead of simultaneously as European Ducks and Geese do?

p. 398. *Anser anser*.—Surely the colour of the bill in life is never livid purplish red but only after death and due to stagnation of blood?

p. 401. *Anser erythropus*.—The goose which breeds in Persia and whose young are brought into the bazaars is certainly *Anser anser* (specimens examined) and not *erythropus*. I know of no record of this bird in Sind and in fact I should accept no record of this bird at all in India unless a specimen or head was forthcoming as it has been so frequently mixed up with *albifrons*.

p. 403. *Anser brachyrhynchus*.—Is there any specimen of this goose from India in existence? If not, it should be deleted from the *Fauna*. The Pink-footed Goose is a bird of rather limited and distinctly westerly distribution in winter at which season, according to Buturlin, there is not a single record so far east even as European Russia. What the Goose obtained in Assam was with a bill of 40.6 mm. I cannot say; this is too small a bill for the Pink-footed Goose, 15 of which in my collection measure 43-50 mm.

p. 405. *Anser indicus*.—The type locality is India, not the Taimyr Peninsula. This bird does not breed in Kashmir proper, though of course it does so within the domains of the Maharajah of Kashmir.

p. 409. *Anatinae*.—The *bulba ossea* is said not to be present in other sub-families *except in the Anserinae*; on p. 396 it is stated that it is absent in *Anserinae*. The latter statement is correct.

pp. 416-7. *Anas ferruginea*.—Described by Pallas, not Vroeg. The rather sketchy description of the nestling in down does not convey the fact that the chick of this bird only differs constantly from the chick of *tadorna* in that the lores are of the same colour as the crown whereas in *tadorna* the lores are white.

The relationship between the two birds is therefore so close that two genera seem to be unnecessary. The old legend of the Brahminy eating human bodies is revived again. Has this ever been proved by a trustworthy witness?

p. 426. *Eumetta*.—The splitting up into many genera or the lumping into one or two is, I suppose, in this group and in other groups, a moot point on which there never will be any agreement. Thus Mr. Baker in the *Fauna* uses eight genera for ducks where Dr. Hartert in the *Vög. Pal. Fauna* uses one genus. It is not without irony that both are members of a Committee appointed to try and produce some uniformity in nomenclature.

p. 428. *Chaulelasmus streperus*.—The nestling in down also

differs from that of the Mallard in having the yellow supercilium not nearly so well marked.

p. 430. *Mareca penelope*.—The diagnostic character of the downy chick is the cinnamon face which no other young duck has so far as I have observed.

p. 435. *Nettion formosum*.—Add one from Sind (vide *Ibis*, 1923, p. 451).

p. 439. *Querquedula*.—Two genera for the Teals seem unnecessary and untenable. *Querquedula* is said to have a broader bill than in *Nettion* with the width greater at the tip than at the base. The bill in *Nettion formosum*, however, is broader than in *Q. querquedula*. The broadening towards the tip in the Garganey moreover is not constant. I have specimens in which the sides are parallel throughout their entire length. The shape of the bony labyrinth certainly is not a generic character, as every male species of duck has a different one.

p. 447. *Nyrocinæ*.—Another good character between these and the surface feeding ducks is the much larger *bulba ossea* in all diving ducks.

p. 448. *Anas rufina*.—The date of Pallas' *Reise* is 1773, not 1833. This duck has not, I think, been found breeding in British Beluchistan.

p. 460. *Nyroca f. fuligula*.—In England at all events the Tufted Pochard is far more partial to fresh water than salt; in fact, in my experience it only goes to salt water when frozen out from fresh.

p. 471. *Mergus merganser merganser*.—This Goosander, the typical form, may of course occur in Sind. I purposely left the question undecided in my *Birds of Sind* as no specimens are in existence. Under such circumstances, I prefer to leave the race as unknown and use the binomial name. Such a course is at least accurate and is not open to the objection that possible errors will be copied.

Surely in the non-breeding season the Goosander is far more a fresh water than a sea bird?—exactly the opposite to the Redbreasted Merganser.

p. 486. *Colymbus arcticus suschkini*.—Mr. Jones recorded this bird merely as *Colymbus arcticus*. Has the skin been compared to determine the race? The wing measurement may be small, but surely by February 19 the bird would be fully grown.

I am at a loss to know whether British Mekran is included within the scope of this work or not. Several birds such as *Strix butleri* find a place in the *Fauna* on the strength of records thence; others are omitted. There is in the British Museum a specimen of *Colymbus stellatus* obtained at Ormara on November 17, 1901. (*J.B.N.H.S.*, xxxii, p. 96.)